

Non-contact temperature measurement of plastic films from 50 to 400 °C (122 °F to 752 °F)



Features:

- Miniaturized infrared thermometer with a spectral range of 3.43 μm for precise temperature measurements of thin plastic films like PE, PP, PS
- Robust and usable in up to 75 °C (167 °F) ambient temperature without cooling
- Separate electronics with easily accessible programming keys and LCD backlit display
- Selectable analog output: 0/4 - 20 mA, 0 - 5 V, 0 - 10 V, thermocouple type K or J
- Optional USB, RS485, RS232 interface, relay outputs (2 x optically isolated), CAN-Bus, Profibus DP, Ethernet



General specifications

Environmental rating	IP 65 (NEMA-4)
Ambient temperature	0 °C ... 75 °C (32 °F ... 167 °F) (sensing head) 0 °C ... 75 °C (32 °F ... 167 °F) (electronics)
Storage temperature	-40 °C ... 85 °C (-40 °F ... 176 °F) (sensing head) -40 °C ... 85 °C (-40 °F ... 176 °F) (electronics)
Relative humidity	10–95%, non condensing
Vibration (sensor)	IEC 68-2-6: 3 G, 11–200 Hz, any axis
Shock (sensor)	IEC 68-2-27: 50 G, 11 ms, any axis
Weight	200 g (7.1 oz) (head with massive housing) 420 g (14.8 oz) (electronics)

Electrical Specifications

Outputs / analog	0/4–20 mA, 0–5/10 V, thermocouple J, K, alarm
Output / alarm	24 V / 50 mA (open collector)
Optional	Relay: 2 x 60 V DC / 42 V AC _{eff} ; 0.4 A; optically isolated
Outputs / digital	USB, RS232, RS485, CAN, Profibus DP, Ethernet (optional)
Output impedances	mA max. 500 Ω (with 8–36 V DC) mV min. 100 kΩ load impedance, thermocouple 20 Ω
Inputs	Programmable functional inputs for external emissivity adjustment, ambient temperature compensation, trigger (reset of hold functions)
Cable length	3 m (standard), 8 m (9.8 ft [standard], 26.2 ft)
Power Supply	8–36 V DC
Current draw	Max. 100 mA

Measurement specifications

Temperature range (scalable via programming keys or software)	50 °C ... 400 °C (122 °F ... 752 °F)
Spectral range	3.43 μm
Optical resolution (90% energy)	15:1
System accuracy ²⁾ (at ambient temp. 23 ±5 °C) (23 ±41 °F)	±3 °C or ±1 % ³⁾ ±5.4 °F or ±1 % ³⁾
Repeatability (at ambient temp. 23 ±5 °C) (23 ±0.5 °F)	±1.5 °C ±2.7 °F
NETD ⁴⁾	0.1 K
Exposure time (90% signal)	100 ms
Emissivity/ Gain (adjustable via programming keys or software)	0.100–1.100
Transmissivity/ Gain (adjustable via programming keys or software)	0.100–1.100
Signal processing (parameter adjustable via programming keys or software, respectively)	Peak hold, valley hold, average; extended hold function with threshold and hysteresis
Software	optris® Compact Connect

¹⁾ $T_{\text{object}} > T_{\text{sensing head}} + 25 \text{ °C} (+77 \text{ °F})$

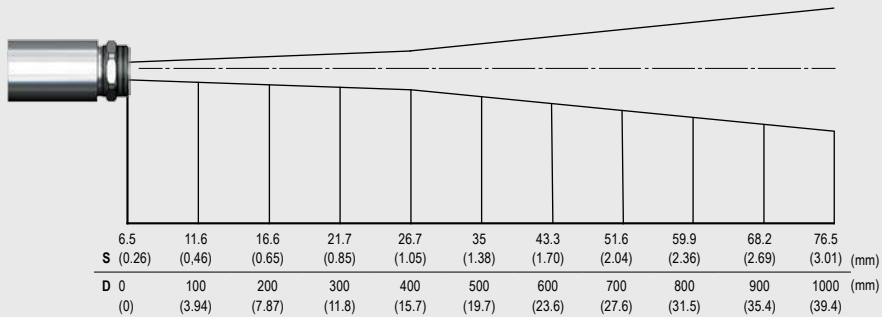
²⁾ Specification valid at $T_{\text{Object}} \geq 75 \text{ °C} (\geq 167 \text{ °F})$

³⁾ Whichever is greater

⁴⁾ 125 °C T_{obj} , 100 ms time constant (257 °C T_{obj} , 100 ms time constant)

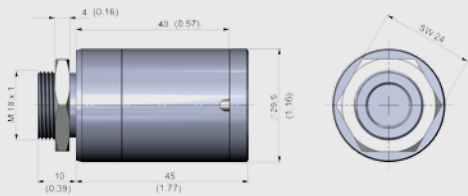
Optical specifications

Optics, D:S = 15:1

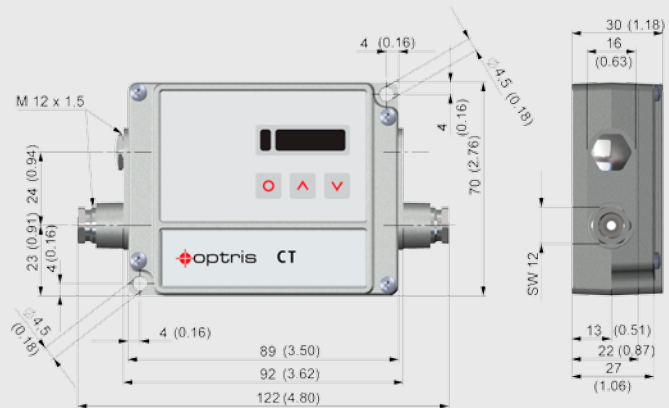


Dimensions

Dimensions massive housing incl. sensing head

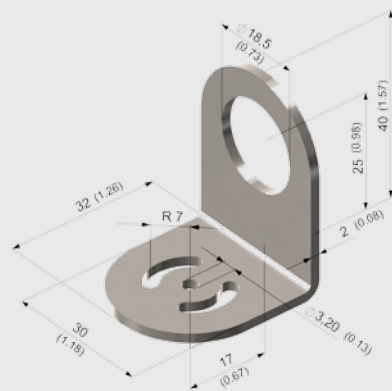


Electronics



Accessories (examples)

Mounting bracket, adjustable in one axis (ACCTFBMH)



Air purge collar (ACCTAPMH)

